

OPERATING A SPONGE FARM.

By Frederic J. Haskin.

The scientific research continually carried on under the different departments of the United States government causes frequent changes in industrial methods. One of the latest of these is in sponge production. Formerly it was called sponge fishing; henceforth it is likely to be known as sponge farming, although it is still under the direction of the bureau of fisheries.

The first man to operate for commercial purposes under the new process developed by the bureau is an Englishman, living in Florida, who lately established the first sponge farm or ranch in the whole world. He purchased a small island, known as Sugar Loaf, where Dr. Moore had been conducting his work, on the western coast of Florida, and made his first planting there less than four years ago. Now he has more than half a million sponges growing on his ranch. Within the next ten years this progressive Englishman expects to establish himself as the sponge king of the world, and to acquire a fortune upon American soil through American aid by utilizing a great opportunity which Americans themselves have strangely overlooked.

Little Stories for Bedtime

By THORNTON W. BURGESS.

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Blacky Finds Out Who Owns the Eggs.

Some things are best forgotten. Who never plays with fire, will surely not be burned.

Two big white eggs in a tumble-down nest and snow and everything else anybody hear of such a thing before?

"Wouldn't believe it if I hadn't seen it with my own eyes," muttered Blacky the Crow. "Have to believe them, if I can't believe them, then it's no use to me."

As sure as I sit here that old nest has two eggs in it. Whoever laid them must be crazy to start housekeeping at this time of year. I must find out whose they are, and then—

Blacky didn't finish, but there was a hungry look in his eyes that would have told any who saw it, had there been any to see it, that he had a use for those eggs. But there was none to see it, and he took the nearest care that there should be none to see him when he once again started for a certain lonesome corner of the Green Forest.

"First I'll make sure that the eggs are still there," thought he, and flew high above the trees so that as he passed over the tree in which was the old nest of Redtail the Hawk he might look down into it, to have seen him who would never have guessed that he was looking for anything in particular. He seemed to be just flying over on his way to some distant place. If the eggs were still there he meant to come back and hide in the top of a nearby pine tree to watch until he was sure that he might safely steal those eggs or find out whose they were.

Blacky's heart beat fast with excitement as he drew near that old tumble-down nest. Would those two big white eggs be there? There were no white eggs there. There were three! The very thought made him flap his wings a little faster. A few more strokes and he would be right over the tree. How he did hope to see those eggs! He could almost see them now. Three strokes! Blacky bit his tongue to keep from giving a sharp cry of disappointment and surprise. There were no eggs to be seen. No, sir; there wasn't a sign of eggs in that old nest. There wasn't because Blacky looked straight down on a great mass of feathers which really covered them from sight, and he didn't have to look twice to know that that great mass of feathers was really a bird, the bird to whom those eggs belonged.

It became certain that new sponges could be grown from pieces of old ones, it became necessary to secure proper bases for their cultivation. Sponges do not grow in the sand. They require a firm foundation, such as rock or coral reef. They are, therefore, most likely to be found where a continual current washes away the sand, leaving the rock exposed. Wooden stakes and cotton and hemp ropes were used in the first sponge-planting experiments, but were not stable enough. A durable and economical method of securing the pieces of sponge in the water is to use concrete disks about ten inches in diameter, to which the bit of sponge is attached by aluminum wire. Copper wire was used at first, but the chemical action of the water was so strong that it completely destroyed the copper wire within a sixth of an inch thick within a year.

Two kinds of disks have been designed so far. The plain ones have two holes through which the wires are threaded. The other kind has a short lead spindle in the center, to which the wires are attached. The latter are more desirable, because the men can attach the sponge pieces to them more quickly than they can string the wires through the holes. According to careful estimates, the plain disks cost two cents and the spindle ones two and a half cents to produce. They are manufactured right on the ranch grounds by mixing the mixed concrete into prepared wooden molds. The disks can be used for many subsequent plantings, so in the long run the spindle ones are the more economical. It was demonstrated last year that it takes fifteen days to plant an acre with plain disks and twelve days with spindle disks. The average daily wage of \$2 makes the difference in planting expense \$6 per acre.

The sponge seed for planting is secured by cutting up a large live sponge into sections having a value of from two to three cubic inches, such as seed potatoes are cut up for planting. The sponge is trimmed free from roots and coral and rock fragments before cutting, and it is considered desirable to leave one side of each seed sponge free from the original skin of the sponge. These cut sponges are placed in tubs of water and allowed to soak for a few days. They are then quickly strung upon the aluminum wires, fastened to the concrete disks, and dropped down into the water. A disk is planted for each square yard, which means 4,800 to the acre. The water contains plenty of nourishment for them, planted at this space. It might be possible to plant them even more closely.

After sponge farming becomes a regularly established industry, and efficient methods are in full use, it will be possible to do the harvesting and planting at the same time and by the same labor. When the disks bearing the fully grown sponges are gathered a new piece of seed sponge will be wired in place of each large sponge taken off. The disk will then be dropped back into the water.

Fully 80 per cent of the planted sponges mature nearly 6,000 sponges of 2,372 to the acre. The average weight of a dry sponge is about an ounce and a half, so that the acre yield is more than 100 pounds. With the increasing demand for sponges for many purposes, \$6 a pound is not too much to expect from a sponge-growing period ranging from twenty-seven months to three years, or an average of \$600 a acre. The expense of the sponge seed, the labor of the men, as well as the cost of the disk and wire, as well as the labor, must be deducted from this, but the sponge farmer can reasonably expect much handsomer profits than the ordinary agriculturist, and incidentally he can work so hard. Unlike other farming, sponges require no labor for cultivation. After they are

planted they are left alone until they have grown large enough to harvest.

At least 500,000 acres of shallow water within easy reach of various Florida lands are believed to be well adapted to sponge farming. Each of these acres can produce nearly 6,000 sponges in a growing season. With so large an acreage to be planted it is good business policy to devote the first sponges raised to seed purposes. After sufficient plantings have been made the sponges are to be placed upon the market with an assured high price. Within the next five years it is expected that many millions of sponges will be grown on these cultivated sponge lands.

Few people realize that the sponge is an animal and not a vegetable product. The sponges on sale in the shops are really the skeletons of one of the strangest animals in existence. The sponge is killed by exposure to the air, although it does not die immediately after it is taken from the water. The fleshy part is macerated by beating with a stick and occasionally submerging the sponges in water. The sponge-cleaning process is one of the most offensive industries in existence, and sponge raising is not likely to be permitted in close proximity to the Florida winter resorts.

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DOESN'T PAY TO GROW CHUMMY WITH TREES

They're Coated With Sulphur and Lime, Which Is Hard on Clothing.

If you happen to be walking through a park on a nice day of this kind, you are sure to be admiring the green of a nice, fresh looking tree or shrub take care that you do not cast your person too near the aforementioned fresh looking shrub or tree.

Because if you do you are liable to catch a nice, large stain upon your perfectly nice clothes, caused by a solution of sulphur and lime with which employees of the office of the superintendent of public buildings and grounds are spraying trees and shrubs these days to kill the scale and fungus growths.

Hard on the Fungi.

The spray plays the mischief with incipient scale and fungi in general, but it is also liable to play the mischief with one's clothes, which, it seems, comes along about August.

The sulphur and lime solution now being sprayed onto trees and shrubs is not particularly poisonous. It is stated, but men are on hand to watch the trees and shrubs until they are dry, and to wash the curious observers away from the danger of getting stained.

Third Spraying in August.

The third spraying given public parks by the office of buildings and grounds is like unto the second in all ways, it being merely a repetition of the arsenate of lead drink to kill the second generation of beetles, which, it seems, comes along about August.

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